LGR’s Ammonia Analyzer - Trace provides extremely fast (5 Hz response) and sensitive measurements of ammonia (and water vapor) in ambient air with high precision (0.2 ppb in 1 second). No longer do you have to spend a lot of money or wait a long time to measure ammonia with high sensitivity – LGR’s Ammonia Analyzer - Trace provides measurements at 5 Hz with sub-ppb precision. In addition, the AAT can report measurements over a very wide range of concentrations and while in flight.

LGR’s new “Enhanced Performance series” incorporates proprietary internal thermal control for ultra-stable, minimal-drift measurements with unsurpassed precision and accuracy.

The AAT use LGR’s patented Off-axis ICOS technology, a fourth generation cavity enhanced absorption technique along with mid-infrared quantum cascade laser. Off-axis ICOS has many advantages over conventional cavity ringdown spectroscopy (CRDS) techniques such as being alignment insensitive, having a much shorter measurement time, and not requiring expensive and power consuming auxiliary components. Quantum cascade lasers operate in the mid-infrared to access the strongest absorption features and yield the highest detection sensitivity.

All LGR instruments include an internal computer (Linux OS) that can store data practically indefinitely on its internal hard drive (for unattended long-term operation), and that can send real-time data to a data logger through its analog, digital (RS232) and Ethernet outputs. Furthermore, the instruments may be controlled remotely via the Internet. This capability allows the user to operate the analyzer using a web browser anywhere. Furthermore, remote access allows full control of the instrument and provides the opportunity to obtain data and diagnose the instrument operation without being on site.
Ammonia Analyzer - Trace (NH₃)

Performance Specifications

Precision (1σ; 0.1 sec / 1 sec / 10 sec):
- 0.7 ppb / 0.2 ppb / 0.08 ppb

Maximum Drift (Enhanced Performance model)
(15 min average, at STP, over 24 hrs):
- 0.2 ppb

NH₃ Measurement Range:
- 0.5 ppb – 10 ppm

NH₃ Operational Range (calibration required):
- 0 – 100 ppm

Sampling Conditions:
- Sample Temperature: 0 – 50 °C
- Operating Temperature: 5 – 45 °C (Standard model)
- Operating Temperature: 0 - 45 °C (EP model)
- Ambient Humidity: 0 - 100% RH non-condensing

Outputs:
- Digital (RS232), analog (0-5 VDC), Ethernet, USB

Power Requirements:
- 115/230 VAC, 50/60 Hz
- 300 watts (EP Model, steady state)

Dimensions:
- Rackmount Package (Enhanced Performance model):
  - 14” × 45” × 17”

Weight:
- 58 kg (Standard models)
- 68 kg (Enhanced Performance model)

Ordering Information

F-AAQC-914: includes LN₂-cooled (0.5 L dewar) detector and Fast Flow option

Accessories

MIU-16: Multiport Inlet Unit – 16-inlet port multiplexer
MIU-8: Multiport Inlet Unit – 8-inlet port multiplexer
ACC-DP20: N920 Pump – flow-through time = 1.2 secs
ACC-DP40: N940 Pump – flow-through time = 0.7 secs
ACC-DS35: Dry Scroll Pump – flow-through time = 0.15 secs
OPT-DATALOG: Data Logging System – multi-channel data logging system records and synchronizes serial (RS-232) outputs from multiple analyzers and other devices (e.g., GPS, anemometers)

Instrument complies with 21 CFR 1040.10 and 1040.11